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Scott G. Hereford

U.S. Fish and Wildlife Service, Mississippi Sandhill Crane National Wildlife Refuge

Tracy E. Grazia

U.S. Fish and Wildlife Service, Mississippi Sandhill Crane National Wildlife Refuge

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MISSISSIPPI SANDHILL CRANE CONSERVATION UPDATE, 2003-2005

SCOTT G. HEREFORD, U.S. Fish and Wildlife Service, Mississippi Sandhill Crane National Wildlife Refuge, 7200 Crane Lane, Gautier, MS 39553, USA

TRACY E. GRAZIA¹, U.S. Fish and Wildlife Service, Mississippi Sandhill Crane National Wildlife Refuge, 7200 Crane Lane, Gautier, MS 39553, USA

Abstract: The Mississippi sandhill crane (*Grus canadensis pulla*) is an endangered non-migratory subspecies found on and near the Mississippi Sandhill Crane National Wildlife Refuge in southeastern Mississippi. From 2003 to 2005, conservation efforts for the recovery of this population included management activities such as protection and law enforcement, restocking, predator management, farming, prescribed burning, mechanical vegetation removal, hydrological restoration, pest plant management, and education. To maintain open savanna, 1842 hectares were burned annually, with 38% during the growing season. To restore open savanna, 506 hectares of woody vegetation were removed using mechanical methods. To bolster the population, we released 17-25 captive-reared juveniles annually. To protect cranes, nests and young, U.S. Department of Agriculture Wildlife Services conducted predator trapping under an Interagency Agreement, resulting in the removal of 15 large predators per year. Crane and habitat monitoring assessed life history parameters including radio-tracking, visual observations, and an annual nest census. Recently, however, a reduction and turnover in refuge biological staff resulted in reduced monitoring capabilities to radio-track cranes. The number of radio-triangulated locations in 2005 was less than a third and that projected for 2006 is 10% of that recorded during 1997 to 2002. We captured 19 AHY (after hatch year) cranes to band or change out worn or nonfunctional radio-transmitters using 4 different methods with nooses accounting for 80% of the captures. Leading known causes of crane mortality were predation (61%) and trauma (27%). An average of 27 nests was produced from 21 pairs annually during the 3 years. Recruitment remained extremely low with less than 3 young fledged per year. The early winter population was 110-125 cranes. Although Hurricane Katrina did not directly result in more than a loss of 5-7 cranes, 2 of the dead were breeding females that accounted for 40% of the fledged young since 1997. Current research needs focus on increasing recruitment and include assessment of causes of nest vulnerability and failure, increasing effectiveness of traditional predator trapping to protect nests and chicks, supplementary non-lethal predator management, and differences in chick food availability between successful and unsuccessful nest territories.

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Key words: endangered species, *Grus canadensis pulla*, Mississippi, Mississippi sandhill crane, reintroduction techniques.

¹ Present address: Massachusetts Division of Fisheries and Wildlife, 1 Rabbit Hill Road, Westborough, MA 01581, USA